



STIC Search Report

EIC 3700

STIC Database Tracking Number: 111824

TO: Darwin Erezo
Location: cp2 3b29
Art Unit: 3761

Case Serial Number: 10/047986

From: Jeanne Horrigan
Location: EIC 3700
CP2-2C08
Phone: 305-5934

jeanne.horrigan@uspto.gov

Search Notes

Attached are the search results for the drug delivery devices made with cold plasma polymerization, including prior art searches in foreign and international patent databases; medical device and general sci/tech non-patent literature databases; and the Web via the Scirus search engine.

Also attached is a search feedback form. Completion of the form is voluntary. Your completing this form would help us improve our search services.

I hope the attached information is useful. Please feel free to contact me (phone 305-5934 or email jeanne.horrigan@uspto.gov) if you have any questions or need additional searching on this application.

A handwritten signature in black ink, appearing to read "J. Horrigan".

Serial 10/047986

January 13, 2004

File 350:Derwent WPIX 1963-2004/UD,UM &UP=200402

File 347:JAPIO Oct 1976-2003/Sep(Updated 040105)

File 371:French Patents 1961-2002/BOPI 200209

| Set | Items | Description |
|-----|---------|--------------------------------------|
| S1 | 33 | AU='WARBY R':AU='WARBY RICHARD JOHN' |
| S2 | 1538366 | POLYMER? |
| S3 | 13 | S1 AND S2 |
| S4 | 9999 | COLD(2W) PLASMA OR GLOW() DISCHARGE |
| S5 | 4 | S1 AND S4 |
| S6 | 4 | S3 AND S5 |

6/7/1 (Item 1 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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015543511 **Image available**

WPI Acc No: 2003-605667/200357

Medicament dispensing apparatus such as inhaler comprises layer of cold plasma - polymerized monomers bonded to internal surfaces of components

Patent Assignee: WARBY R J (WARB-I)

Inventor: **WARBY R J**

Number of Countries: 001 Number of Patents: 001

Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week |
|----------------|------|----------|---------------|------|----------|----------|
| US 20020144678 | A1 | 20021010 | US 2000642656 | A | 20000822 | 200357 B |
| | | | US 200247986 | A | 20020117 | |

Priority Applications (No Type Date): WO 99GB532 A 19990219; GB 983780 A 19980223; GB 988804 A 19980424; GB 9814717 A 19980707

Patent Details:

| Patent No | Kind | Lan Pg | Main IPC | Filing Notes |
|----------------|------|--------|-------------|-----------------------------------|
| US 20020144678 | A1 | 6 | A61M-011/00 | Cont of application US 2000642656 |

Abstract (Basic): US 20020144678 A1

NOVELTY - A medicament dispensing apparatus comprises a layer of **cold plasma - polymerized** monomers bonded to at least a portion of internal surfaces of components which come into contact with medicament during storage or dispensing, provided that the layer is not of a **cold plasma - polymerized** fluorinated hydrocarbon when the apparatus is a pressurized dispensing container.

USE - The apparatus is used for dispensing medicament (claimed).

ADVANTAGE - The layer of **cold plasma polymer** on the surface of the component parts reduces the deposition of active drugs on the relevant surfaces due to factors, e.g. anti-frictional and waterproof characteristics and low surface energy.

DESCRIPTION OF DRAWING(S) - The figure shows a cross-sectional view through an inhaler, which is one type of drug delivery device of the invention.

Housing (11)

Container (12)

Mouthpiece (14)

Valve stem (17)

Duct (18)

Internal surfaces (21,22)

pp; 6 DwgNo 1/2

Derwent Class: A96; B07; P34

International Patent Class (Main): A61M-011/00

6/7/2 (Item 2 from file: 350)

DIALOG(R)File 350:Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.
013835368 **Image available**
WPI Acc No: 2001-319580/200134

Medicament dispensing device comprises internal surface bonded with layer of cold plasma polymerized monomers

Patent Assignee: BESPAK PLC (BESP-N)

Inventor: STANFORD A; **WARBY R J**

Number of Countries: 001 Number of Patents: 002

Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week |
|------------|------|----------|-------------|------|----------|----------|
| GB 2355252 | A | 20010418 | GB 9924355 | A | 19991014 | 200134 B |
| GB 2355252 | B | 20020123 | GB 9924355 | A | 19991014 | 200208 |

Priority Applications (No Type Date): GB 9924355 A 19991014

Patent Details:

| Patent No | Kind | Lan Pg | Main IPC | Filing Notes |
|------------|------|--------|-------------|--------------|
| GB 2355252 | A | 17 | B65D-083/14 | |
| GB 2355252 | B | | B65D-083/14 | |

Abstract (Basic): GB 2355252 A

NOVELTY - A medicament dispensing device comprises an internal surface bonded with a layer of **cold plasma polymerized** monomers which can be siloxanes, silazanes, or alkoxy silanes.

USE - Useful as metering valve for use with pressurized dispensing container, i.e. drug delivery device.

ADVANTAGE - The layer of plasma **polymer** in the component parts reduces the deposition of active drugs on the surfaces, thus reducing the tendency of stored product contamination inexpensively and without consuming much time. The dispensing device has long shelf life or is designed to have long operating life.

DESCRIPTION OF DRAWING(S) - The drawing shows a cross-sectional view through an inhaler, which is one type of the inventive drug delivery device.

- Housing (11)
- Medicament storing container (12)
- Mouthpiece (14)
- Valve stem (17)
- Duct (18)
- Internal surfaces (21, 22)
- pp; 17 DwgNo 1/2

Derwent Class: A26; A96; B07; P34; Q34

International Patent Class (Main): B65D-083/14

International Patent Class (Additional): A61M-015/00

6/7/3 (Item 3 from file: 350)

DIALOG(R)File 350:Derwent WPIX
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012712404 **Image available**
WPI Acc No: 1999-518517/199943

Metered dose apparatus like an inhaler dispenses metered dose of medicament

Patent Assignee: GLAXO GROUP LTD (GLAX); BESPAK PLC (BESP-N); BESPAK GB PLC (BESP-N); WARBY R J (WARB-I)

Inventor: **WARBY R J**

Number of Countries: 085 Number of Patents: 024

Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week |
|-----------|------|------|-------------|------|------|------|
|-----------|------|------|-------------|------|------|------|

| | | | | | | | |
|----------------|----|----------|---------------|---|----------|--------|---|
| WO 9942154 | A1 | 19990826 | WO 99GB532 | A | 19990219 | 199943 | B |
| AU 9925401 | A | 19990906 | AU 9925401 | A | 19990219 | 200003 | |
| NO 200004196 | A | 20000822 | WO 99GB532 | A | 19990219 | 200056 | |
| | | | NO 20004196 | A | 20000822 | | |
| AU 200053383 | A | 20001026 | AU 9925401 | A | 19990219 | 200059 | N |
| | | | AU 200053383 | A | 20000815 | | |
| BR 9908151 | A | 20001031 | BR 998151 | A | 19990219 | 200060 | |
| | | | WO 99GB532 | A | 19990219 | | |
| EP 1066073 | A1 | 20010110 | EP 99905106 | A | 19990219 | 200103 | |
| | | | WO 99GB532 | A | 19990219 | | |
| CA 2327046 | A1 | 19990826 | CA 2321002 | A | 19990219 | 200112 | |
| | | | CA 2327046 | A | 19990219 | | |
| EP 1088567 | A2 | 20010404 | EP 99905106 | A | 19990219 | 200120 | |
| | | | EP 2001100963 | A | 19990219 | | |
| SK 200001270 | A3 | 20010312 | WO 99GB532 | A | 19990219 | 200126 | |
| | | | SK 20001270 | A | 19990219 | | |
| CZ 200003078 | A3 | 20010411 | WO 99GB532 | A | 19990219 | 200130 | |
| | | | CZ 20003078 | A | 19990219 | | |
| CN 1291109 | A | 20010411 | CN 99803237 | A | 19990219 | 200140 | |
| JP 2001190669 | A | 20010717 | JP 2000340938 | A | 19990219 | 200144 | |
| | | | JP 2000532166 | A | 19990219 | | |
| KR 2001034523 | A | 20010425 | KR 2000709255 | A | 20000822 | 200164 | |
| HU 200101459 | A2 | 20010928 | WO 99GB532 | A | 19990219 | 200168 | |
| | | | HU 20011459 | A | 19990219 | | |
| AU 742080 | B | 20011220 | AU 9925401 | A | 19990219 | 200208 | |
| JP 2002503527 | W | 20020205 | WO 99GB532 | A | 19990219 | 200212 | |
| | | | JP 2000532166 | A | 19990219 | | |
| EP 1066073 | B1 | 20020612 | EP 99905106 | A | 19990219 | 200239 | |
| | | | WO 99GB532 | A | 19990219 | | |
| | | | EP 2001100963 | A | 19990219 | | |
| | | | EP 20021152 | A | 19990219 | | |
| EP 1208864 | A2 | 20020529 | EP 99905106 | A | 19990219 | 200243 | |
| | | | EP 20021152 | A | 19990219 | | |
| DE 69901813 | E | 20020718 | DE 601813 | A | 19990219 | 200255 | |
| | | | EP 99905106 | A | 19990219 | | |
| | | | WO 99GB532 | A | 19990219 | | |
| AU 753921 | B | 20021031 | AU 9925401 | A | 19990219 | 200282 | N |
| | | | AU 200053383 | A | 20000815 | | |
| ES 2178388 | T3 | 20021216 | EP 99905106 | A | 19990219 | 200306 | |
| US 20030101993 | A1 | 20030605 | US 2000642657 | A | 20000822 | 200339 | |
| | | | US 2003346317 | A | 20030117 | | |
| US 20020144678 | A1 | 20021010 | US 2000642656 | A | 20000822 | 200357 | |
| | | | US 200247986 | A | 20020117 | | |
| NZ 506316 | A | 20031128 | NZ 506316 | A | 19990219 | 200382 | |
| | | | WO 99GB532 | A | 19990219 | | |

Priority Applications (No Type Date): GB 9814717 A 19980707; GB 983780 A 19980223; GB 988804 A 19980424; AU 200053383 A 20000815

Patent Details:

| Patent No | Kind | Lan | Pg | Main IPC | Filing Notes |
|------------|------|-----|----|-------------|--------------|
| WO 9942154 | A1 | E | 19 | A61M-015/00 | |

Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW

AU 9925401 A Based on patent WO 9942154
NO 200004196 A A61M-011/02
AU 200053383 A A61M-015/00 Div ex application AU 9925401
BR 9908151 A Based on patent WO 9942154
EP 1066073 A1 E Based on patent WO 9942154
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT
LI LT LU LV MC MK NL PT RO SE SI
CA 2327046 A1 E A61M-015/00 Div ex application CA 2321002
EP 1088567 A2 E A61M-015/00 Div ex application EP 99905106
Div ex patent EP 1066073
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT
LI LT LU LV MC MK NL PT RO SE SI
SK 200001270 A3 Based on patent WO 9942154
CZ 200003078 A3 Based on patent WO 9942154
JP 2001190669 A 6 A61M-011/08 Div ex application JP 2000532166
KR 2001034523 A A61M-015/00
HU 200101459 A2 A61M-015/00 Based on patent WO 9942154
AU 742080 B A61M-015/00 Previous Publ. patent AU 9925401
Based on patent WO 9942154
Based on patent WO 9942154
JP 2002503527 W 21 A61M-011/08 Based on patent WO 9942154
EP 1066073 B1 E A61M-015/00 Related to application EP 2001100963
Related to application EP 20021152
Related to patent EP 1088567
Related to patent EP 1208864
Based on patent WO 9942154
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT
LI LT LU LV MC MK NL PT RO SE SI
EP 1208864 A2 E A61M-015/00 Div ex application EP 99905106
Div ex patent EP 1066073
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT
LI LT LU LV MC MK NL PT RO SE SI
DE 69901813 E A61M-015/00 Based on patent EP 1066073
Based on patent WO 9942154
AU 753921 B A61M-015/00 Div ex application AU 9925401
Previous Publ. patent AU 200053383
Div ex patent AU 742080
ES 2178388 T3 A61M-015/00 Based on patent EP 1066073
US 20030101993 A1 A61M-011/00 Cont of application US 2000642657
US 20020144678 A1 6 A61M-011/00 Cont of application US 2000642656
NZ 506316 A A61M-015/00 Based on patent WO 9942154

Abstract (Basic): WO 9942154 A1

NOVELTY - Apparatus (10) has at least a portion of one or more of the internal surfaces of components of the apparatus which come into contact with medicament during storage or dispensing, has a layer of one or more **cold plasma polymerised** monomers bonded to this portion.

DETAILED DESCRIPTION - The layer is of **polymerized** fluorinated hydrocarbon like per fluoro-cyclohexane, perfluorohexane, tetrafluoroethylene, trifluoroethylene, vinylidene fluoride, vinyl fluoride, fluoroethylene or fluoropropylene or **polymerised** siloxane.

USE - To minimise deposition of the product and active component on the internal surfaces of components of a drug delivery device (e.g. an inhaler) during storage or dispensing.

ADVANTAGE - The coating significantly reduces the deposition of active drugs on the relevant surfaces due to factors like anti-frictional and waterproof characteristics and low surface energy.

DESCRIPTION OF DRAWING(S) - The drawing shows an inhaler.
Inhaler apparatus (10)
pp; 19 DwgNo 1/2
Derwent Class: A14; A26; A96; B07; P34; P42; Q34
International Patent Class (Main): A61M-011/00; A61M-011/02; A61M-011/08;
A61M-015/00
International Patent Class (Additional): B05B-009/04; B05D-007/24;
B65D-083/14; B65D-083/34; B65D-083/36; C08F-002/52; C08F-014/18;
C08G-061/02

6/7/4 (Item 1 from file: 347)

DIALOG(R)File 347:JAPIO

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06963102 **Image available**

DRUG-DISPENSING DEVICE

PUB. NO.: 2001-190669 [JP 2001190669 A]

PUBLISHED: July 17, 2001 (20010717)

INVENTOR(s): **WARBY RICHARD JOHN**

APPLICANT(s): GLAXO GROUP LTD

APPL. NO.: 2000-340938 [JP 2000340938]

Division of 2000-532166 [JP 2000532166]

FILED: February 19, 1999 (19990219)

PRIORITY: 98 9803780 [GB 983780], GB (United Kingdom), February 23,
1998 (19980223)

98 9808804 [GB 988804], GB (United Kingdom), April 24, 1998
(19980424)

98 9814717 [GB 9814717], GB (United Kingdom), July 07, 1998
(19980707)

ABSTRACT

PROBLEM TO BE SOLVED: To provide a drug-dispensing device which minimizes the sedimentation of products or active drug components in general.

SOLUTION: In the pressure administration vessel for administering drugs, at least one part of the inner surface of the constituents of the pressure administration vessel coming into contact with the drug during storage or at administration possesses one or more **cold plasma polymerization** monomer layer which is connected to at least a part thereof. The above-mentioned layer is a **cold plasma polymerization** fluorohydrocarbon.

COPYRIGHT: (C)2001,JPO

Serial 10/047986

January 13, 2004

File 348: EUROPEAN PATENTS 1978-2003/Dec W02

File 349: PCT FULLTEXT 1979-2002/UB=20031225, UT=20031218

| Set | Items | Description |
|-----------|----------|--|
| S1 | 21 | AU='WARBY RICHARD':AU='WARBY RICHARD JOHN' |
| S2 | 4219 | COLD(2W) PLASMA OR GLOW() DISCHARGE |
| S3 | 4 | S1 AND S2 |

3/3,AB/1 (Item 1 from file: 348)

DIALOG(R) File 348: EUROPEAN PATENTS

(c) 2003 European Patent Office. All rts. reserv.

01431872

Improvements in drug delivery devices**Vorrichtungen zur Medikamentverabreichung****Dispositifs pour administrer des medicaments****PATENT ASSIGNEE:**GLAXO GROUP LIMITED, (203920), Glaxo Wellcome House Berkeley Avenue,
Greenford, Middlesex UB6 0NN, (GB), (Applicant designated States: all)**INVENTOR:****Warby, Richard John**, 93 Church Road, Emneth, Norfolk PE14 8 AF, (GB)**LEGAL REPRESENTATIVE:**Rice, Jason Neale (87722), GlaxoSmithKline, Corporate Intellectual
Property, 980 Great West Road, Brentford, Middlesex TW8 9GS, (GB)
PATENT (CC, No, Kind, Date): EP 1208864 A2 020529 (Basic)

EP 1208864 A3 031217

APPLICATION (CC, No, Date): EP 2002001152 990219;

PRIORITY (CC, No, Date): GB 9803780 980223; GB 9808804 980424; GB 9814717
980707DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
LU; MC; NL; PT; SE

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

RELATED PARENT NUMBER(S) - PN (AN):

EP 1066073 (EP 99905106)

INTERNATIONAL PATENT CLASS: A61M-015/00; B05D-007/24; B65D-083/14

ABSTRACT EP 1208864 A2

The invention relates to improvements in drug delivery devices and particularly those for dispensing a metered dose of medicament. Apparatus (10,100) is provides for dispensing medicament wherein at least a portion of one or more of the internal surfaces of components of the apparatus (10,100) which come into contact with the medicament during storage or dispensing has a layer of one or more cold plasma polymerised monomers bonded to at least a portion thereof.

ABSTRACT WORD COUNT: 75

NOTE: Figure number on first page: 2

LANGUAGE (Publication, Procedural, Application): English; English; English

FULLTEXT AVAILABILITY:

| Available Text | Language | Update | Word Count |
|------------------------------------|-----------|--------|------------|
| CLAIMS A | (English) | 200222 | 575 |
| SPEC A | (English) | 200222 | 2194 |
| Total word count - document A | | | 2769 |
| Total word count - document B | | | 0 |
| Total word count - documents A + B | | | 2769 |

3/3,AB/2 (Item 2 from file: 348)

DIALOG(R) File 348: EUROPEAN PATENTS

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01264155

Improvements in drug delivery devices
Abgabevorrichtungen fur Arzneimittel
Appareil dispenseur de medicament

PATENT ASSIGNEE:

Bespak plc, (553660), Bergen Way North Lynn Industrial Estate, King's Lynn Norfolk PE30 2JJ, (GB), (Applicant designated States: all)

INVENTOR:

Warby, Richard John, 93 Church Road, Emneth, Wisbech, Cambridgeshire, PE14 8AF, (GB)

LEGAL REPRESENTATIVE:

Alexander, Thomas Bruce et al (27591), BOULT WADE TENNANT, Verulam Gardens 70 Gray's Inn Road, London WC1X 8BT, (GB)

PATENT (CC, No, Kind, Date): EP 1088567 A2 010404 (Basic)
EP 1088567 A3 031217

APPLICATION (CC, No, Date): EP 2001100963 990219;

PRIORITY (CC, No, Date): GB 9803780 980223; GB 9808804 980424; GB 9814717 980707

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

RELATED PARENT NUMBER(S) - PN (AN):

EP 1066073 (EP 99905106)

INTERNATIONAL PATENT CLASS: A61M-015/00; B05D-007/24; B65D-083/14

ABSTRACT EP 1088567 A2

The invention relates to improvements in drug delivery devices and particularly those for dispensing a metered dose of medicament. Apparatus (10, 110) is provided for dispensing medicament wherein at least a portion of one or more of the internal surfaces of components of the apparatus (10, 110) which come into contact with the medicament during storage or dispensing has a layer of one or more **cold plasma** preliminarised monomers bonded to at a least a portion thereof.

ABSTRACT WORD COUNT: 78

NOTE: Figure number on first page: 1 2

LANGUAGE (Publication, Procedural, Application): English; English; English

FULLTEXT AVAILABILITY:

| Available Text | Language | Update | Word Count |
|------------------------------------|-----------|--------|------------|
| CLAIMS A | (English) | 200114 | 524 |
| SPEC A | (English) | 200114 | 2290 |
| Total word count - document A | | | 2814 |
| Total word count - document B | | | 0 |
| Total word count - documents A + B | | | 2814 |

3/3,AB/3 (Item 3 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

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01081600

Pressurised dispensing containers

Unter Druck gesetzte Spenderbehälter

Recipients distributeurs pressurisés

PATENT ASSIGNEE:

GLAXO GROUP LIMITED, (203920), Glaxo Wellcome House Berkeley Avenue, Greenford, Middlesex UB6 0NN, (GB), (Proprietor designated states: all)

INVENTOR:

WARBY, Richard, John, 93 Church Road, Emneth, Norfolk PE14 8AF, (GB)

LEGAL REPRESENTATIVE:

Rice, Jason Neale et al (87722), GlaxoSmithKline, Corporate Intellectual

Serial 10/047986

January 13, 2004

Property, 980 Great West Road, Brentford, Middlesex TW8 9GS, (GB)

PATENT (CC, No, Kind, Date): EP 1066073 A1 010110 (Basic)
 EP 1066073 B1 020612
 WO 9942154 990826

APPLICATION (CC, No, Date): EP 99905106 990219; WO 99GB532 990219

PRIORITY (CC, No, Date): GB 9803780 980223; GB 9808804 980424; GB 9814717
 980707

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
 LU; MC; NL; PT; SE

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

RELATED DIVISIONAL NUMBER(S) - PN (AN):
 EP 1088567 (EP 2001100963)
 EP 1208864 (EP 2002001152)

INTERNATIONAL PATENT CLASS: A61M-015/00; B05D-007/24; B65D-083/14

NOTE: No A-document published by EPO

LANGUAGE (Publication, Procedural, Application): English; English; English

FULLTEXT AVAILABILITY:

| Available Text | Language | Update | Word Count |
|------------------------------------|-----------|--------|------------|
| CLAIMS B | (English) | 200224 | 385 |
| CLAIMS B | (German) | 200224 | 370 |
| CLAIMS B | (French) | 200224 | 442 |
| SPEC B | (English) | 200224 | 2192 |
| Total word count - document A | | | 0 |
| Total word count - document B | | | 3389 |
| Total word count - documents A + B | | | 3389 |

3/3,AB/4 (Item 1 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT
 (c) 2003 WIPO/Univentio. All rts. reserv.
 00510802

DRUG DELIVERY DEVICES**DISPOSITIFS D'ADMINISTRATION DE MEDICAMENTS**

Patent Applicant/Assignee:

BESPAK PLC,
 WARBY Richard John,

Inventor(s):

WARBY Richard John

Patent and Priority Information (Country, Number, Date):

Patent: WO 9942154 A1 19990826
 Application: WO 99GB532 19990219 (PCT/WO GB9900532)
 Priority Application: GB 983780 19980223; GB 988804 19980424; GB 9814717
 19980707

Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES
 FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU
 LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA
 UG US UZ VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM
 AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM
 GA GN GW ML MR NE SN TD TG

Publication Language: English

Fulltext Word Count: 2974

English Abstract

The invention relates to improvements in drug delivery devices and particularly those for dispensing a metered dose of medicament. Apparatus (10, 110) is provided for dispensing medicament wherein at least a portion of one or more of the internal surfaces of components of the apparatus (10, 110) which come into contact with the medicament during

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January 13, 2004

storage or dispensing has a layer of one or more **cold plasma**
polymerised monomers bonded to a at least a portion thereof.

File 476:Financial Times Fulltext 1982-2004/Jan 12
File 710:Times/Sun.Times(London) Jun 1988-2004/Jan 10
File 711:Independent(London) Sep 1988-2004/Jan 12
File 756:Daily/Sunday Telegraph 2000-2004/Jan 12
File 757:Mirror Publications/Independent Newspapers 2000-2004/Jan 12

| Set | Items | Description |
|-----|--------|---|
| S1 | 100 | WARBY |
| S2 | 6 | COLD (2W) PLASMA OR GLOW() DISCHARGE [not relevant] |
| S3 | 0 | S1 AND S2 |
| S4 | 190586 | DRUG? ? |
| S5 | 8 | S1 AND S4 |
| S6 | 7 | RD (unique items) [not relevant] |

File 155:MEDLINE(R) 1966-2004/Jan W2
File 5:Biosis Previews(R) 1969-2004/Jan W1
File 73:EMBASE 1974-2004/Jan W1
File 34:SciSearch(R) Cited Ref Sci 1990-2004/Jan W1
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec

| Set | Items | Description |
|-----|-------|-------------------------|
| S1 | 1 | AU='WARBY RICHARD JOHN' |

1/7/1 (Item 1 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)
(c) 2004 BIOSIS. All rts. reserv.
0014527531 BIOSIS NO.: 200300496250

Drug delivery devices

AUTHOR: Barnes Paul (Reprint); Lechner Marc; **Warby Richard John**

AUTHOR ADDRESS: King's Lynn, UK**UK

JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents 1274 (5): Sep. 30, 2003 2003

MEDIUM: e-file

ISSN: 0098-1133 (ISSN print)

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: The invention relates to improvements to drugs delivery devices, in particular, those for dispensing a metered dose of medicament. There is provided apparatus (10, 110) for dispensing a medicament wherein at least a portion of one or more of the surfaces of components of the apparatus which come into contact with the medicament during storage or dispensing has a layer of a poly-para-xylylene polymer also known as parylene bonded to at least a portion thereof.

File 155: MEDLINE(R) 1966-2004/Jan W2
File 5: Biosis Previews(R) 1969-2004/Jan W1
File 73: EMBASE 1974-2004/Jan W1
File 34: SciSearch(R) Cited Ref Sci 1990-2004/Jan W1
File 434: SciSearch(R) Cited Ref Sci 1974-1989/Dec
File 144: Pascal 1973-2004/Jan W1
File 2: INSPEC 1969-2004/Jan W1
File 6: NTIS 1964-2004/Jan W2
File 8: Ei Compendex(R) 1970-2004/Jan W1
File 94: JICST-EPlus 1985-2004/Jan W1
File 95: TEMA-Technology & Management 1989-2004/Dec W3
File 99: Wilson Appl. Sci & Tech Abs 1983-2003/Nov
File 65: Inside Conferences 1993-2004/Jan W2
File 35: Dissertation Abs Online 1861-2004/Dec
Set Items Description
S1 28958 PERFLUOROCYCLOHEXANE OR PERFLUOROHEXANE OR TETRAFLUOROETHYLENE OR TRIFLUOROETHYLENE OR VINYL() FLUORIDE OR VINYLFLUORIDE OR FLUOROETHYLENE OR VINYLIDENE() FLUORIDE OR VINYLIDENEFLUORIDE OR FLUOROPROPYLENE
S2 252270 MONOMER? ?
S3 12 COLD() PLASMA() POLYMERI?
S4 1855 (COLD(3W) PLASMA OR GLOW() DISCHARGE OR COLD(2W) DISCHARGE) (2-W) POLYMERI?
S5 144792 INHALER? ? OR NEBULI?ER? ? OR VAPORI?ER? ? OR VAPOURI?ER? - OR DRUG() DELIVERY OR MDI
S6 17947 INHALING OR DISPENSING
S7 9638948 DRUG? ?
S8 490526 PHARMACEUTIC?
S9 118487 MEDICAMENT? ?
S10 6698825 MEDICINE? ?
S11 507 S1:S2 AND S3:S4
S12 1 S11 AND S5:S6
S13 7 S11 AND S7
S14 1 S11 AND S8:S9
S15 1 S11 AND S10
S16 8 S12:S15
S17 5 RD (unique items)
S18 5 Sort S17/ALL/PY,A

18/3,K/1 (Item 1 from file: 155)

DIALOG(R) File 155: MEDLINE(R)
(c) format only 2004 The Dialog Corp. All rts. reserv.
02445808 77135183 PMID: 1021156
Lindholm blood coagulation test values of some glow-discharge polymer surfaces.
Yasuda H; Bumgarner M O; Mason R G
Biomaterials, medical devices, and artificial organs (UNITED STATES)
1976, 4 (3-4) p307-21, ISSN 0090-5488 Journal Code: 0356630
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
... be used to modify the blood compatibility of the polymer surface.
Glow-discharge polymers of **tetrafluoroethylene**, hexamethyldisiloxane,
ethylene-N2, and allene-N2-H2O were deposited onto Mylar film and...
... to compatibility of surfaces with fresh human blood and to

reproducibility of sample preparation by **glow - discharge polymerization**. The study also revealed that **glow - discharge polymerization** is a promising method to impart blood compatibility without altering other bulk properties of substrate...

Descriptors: Blood Coagulation--**drug effects**--DE; *Polymers--toxicity--TO

18/3,K/2 (Item 2 from file: 155)

DIALOG(R)File 155: MEDLINE(R)

(c) format only 2004 The Dialog Corp. All rts. reserv.
03702695 82113888 PMID: 7326319

The adhesion of **glow--discharge polymers**, Silastic and Parylene to implantable platinum electrodes: results of tensile pull tests after exposure to isotonic sodium chloride.

Sadhir R K; James W J; Yasuda H K; Sharma A K; Nichols M F; Hahn A W
Biomaterials (ENGLAND) Oct 1981, 2 (4) p239-43, ISSN 0142-9612

Journal Code: 8100316

Contract/Grant No.: NS-8-2393; NS; NINDS

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

... a key parameter in their selection for various devices. Instron pull tests were performed on **glow - discharge polymerized monomers**, Parylene-N, medical-grade Silastic and various epoxies. The application of a thin coating of **glow - discharge polymerized** methane under a thicker Parylene-N coating improved the adhesion of the latter to the...

; Epoxy Compounds; Platinum; Silicone Elastomers; Tensile Strength--**drug effects**--DE

18/3,K/3 (Item 3 from file: 144)

DIALOG(R)File 144:Pascal

(c) 2004 INIST/CNRS. All rts. reserv.
08526878 PASCAL No.: 89-0075758

Control of antipyrine release rate by plasma coating using tetrafluoroethylene and propargyl alcohol blend monomer

KITADE T; KITAMURA K; HOZUMI K

Kyoto pharmaceutical univ., Yamashina-ku Kyoto 607, Japan

Journal: Chemical and pharmaceutical bulletin, 1987, 35 (11) 4410-4417

Language: English

English Descriptors: Check; Release; Reaction rate; Coating material;
Ethylene(tetrafluoro); Thin film; **Drug** ; Optical microscopy; Control
release polymer; **Glow discharge polymerization**

File 98:General Sci Abs/Full-Text 1984-2003/Nov
File 9:Business & Industry(R) Jul/1994-2004/Jan 08
File 16:Gale Group PROMT(R) 1990-2004/Jan 12
File 160:Gale Group PROMT(R) 1972-1989
File 148:Gale Group Trade & Industry DB 1976-2004/Jan 12
File 621:Gale Group New Prod.Annou.(R) 1985-2004/Jan 12
File 149:TGG Health&Wellness DB(SM) 1976-2004/Jan W1
File 636:Gale Group Newsletter DB(TM) 1987-2004/Jan 12
File 441:ESPICOM Pharm&Med DEVICE NEWS 2004/Jan W2
File 20:Dialog Global Reporter 1997-2004/Jan 12
Set Items Description
S1 1388 PERFLUOROCYCLOHEXANE OR PERFLUOROHEXANE OR TETRAFLUOROETHYLENE OR TRIFLUOROETHYLENE OR VINYL()FLUORIDE OR VINYLFLUORIDE OR FLUOROETHYLENE OR VINYLIDENE()FLUORIDE OR VINYLIDENEFLUORIDE OR FLUOROPROPYLENE
S2 44734 MONOMER? ?
S3 5 COLD()PLASMA()POLYMERI?
S4 12 (COLD(3W)PLASMA OR GLOW()DISCHARGE OR COLD(2W)DISCHARGE) (2-W) POLYMERI?
S5 117162 INHALER? ? OR NEBULI?ER? ? OR VAPORI?ER? ? OR VAPOURI?ER? - OR DRUG()DELIVERY OR MDI
S6 81062 INHALING OR DISPENSING
S7 45800 S1:S2
S8 12 S3:S4
S9 7 S7 AND S8
S10 0 S9 AND S5:S6
S11 7 S9
S12 5 RD (unique items)
S13 5 Sort S12/ALL/PD,A [not relevant]

Serial 10/047986

January 13, 2004

File 373:Adis Clinical Trials Insight 1982-June 2000

File 429:Adis Newsletters (Archive) 1982-2004/Jan 13

File 129:PHIND(Archival) 1980-2004/Jan W1

File 158:DIOGENES(R) 1976-2004/Jan W2

File 187:F-D-C Reports 1987-2004/Jan W1

File 649:Gale Group Newswire ASAP(TM) 2004/Jan 02

Set Items Description

S1 40 PERFLUOROCYCLOHEXANE OR PERFLUOROHEXANE OR TETRAFLUOROETHYLENE OR TRIFLUOROETHYLENE OR VINYL()FLUORIDE OR VINYLFLUORIDE OR FLUOROETHYLENE OR VINYLIDENE()FLUORIDE OR VINYLIDENEFLUORIDE OR FLUOROPROPYLENE

S2 1553 MONOMER? ?

S3 0 COLD()PLASMA()POLYMERI?

S4 0 (COLD(3W)PLASMA OR GLOW()DISCHARGE OR COLD(2W)DISCHARGE) (2-W) POLYMERI?

S5 37056 INHALER? ? OR NEBULI?ER? ? OR VAPORI?ER? ? OR VAPOURI?ER? - OR DRUG()DELIVERY OR MDI

S6 11861 INHALING OR DISPENSING

S7 621380 DRUG? ?

S8 324507 PHARMACEUTIC?

S9 941 MEDICAMENT? ?

S10 161211 MEDICINE? ?

File 71:ELSEVIER BIOBASE 1994-2004/Jan W2

File 74:Int.P Pharm.Abs 1970-2004/Nov B2

File 285:BioBusiness(R) 1985-1998/Aug W1

Set Items Description

S1 150 PERFLUOROCYCLOHEXANE OR PERFLUOROHEXANE OR TETRAFLUOROETHYLENE OR TRIFLUOROETHYLENE OR VINYL()FLUORIDE OR VINYLFLUORIDE OR FLUOROETHYLENE OR VINYLIDENE()FLUORIDE OR VINYLIDENEFLUORIDE OR FLUOROPROPYLENE

S2 11859 MONOMER? ?

S3 0 COLD()PLASMA()POLYMERI?

S4 3 (COLD(3W)PLASMA OR GLOW()DISCHARGE OR COLD(2W)DISCHARGE) (2-W) POLYMERI?

S5 23263 INHALER? ? OR NEBULI?ER? ? OR VAPORI?ER? ? OR VAPOURI?ER? - OR DRUG()DELIVERY OR MDI

S6 6295 INHALING OR DISPENSING

S7 494303 DRUG? ?

S8 0 S4 AND S5:S6

4/6/1 (Item 1 from file: 71)

02408593 2003192298

A new approach for immobilization of oligonucleotides onto piezoelectric quartz crystal for preparation of a nucleic acid sensor for following hybridization

PUBLICATION DATE: October 1, 2003

4/6/2 (Item 2 from file: 71)

02353262 2003135766

Investigation of complexation of immobilized metallothionein with Zn(II) and Cd(II) ions using piezoelectric crystals

PUBLICATION DATE: August 1, 2003

4/7/3 (Item 3 from file: 71)

DIALOG(R)File 71:ELSEVIER BIOBASE

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01812594 2001174527

Plasma polymerized N-isopropylacrylamide: Synthesis and characterization of
a smart thermally responsive coating

Vickie Pan Y.; Wesley R.A.; Luginbuhl R.; Denton D.D.; Ratner B.D.

ADDRESS: B.D. Ratner, University of Washington, Department of
Bioengineering, Box 351720, Seattle, WA 98195, United States

EMAIL: ratner@uweb.engr.washington

Journal: Biomacromolecules, 2/1 (32-36), 2001, United States

CODEN: BOMAF

ISSN: 1525-7797

DOCUMENT TYPE: Article

LANGUAGES: English SUMMARY LANGUAGES: English

NO. OF REFERENCES: 43

A lower critical solution temperature (LCST) in an aqueous environment has been observed with poly(N-isopropylacrylamide) isopropylacrylamide (pNIPAM) deposited onto solid surfaces from a plasma glow discharge of NIPAM vapor. The synthesis and spectroscopic data (ESCA, FTIR) for the plasma polymerized NIPAM (ppNIPAM) shows a remarkable retention of the monomer structure. The phase transition at 29 degreesC was measured by a novel AFM method. The phase transition was surprising because of the expectation that the plasma environment would destroy the specific NIPAM structure associated with the thermal responsiveness. The phase change of ppNIPAM is also responsible for the changes in the level of the meniscus when coated capillaries are placed in warm and cold water. Plasma polymerization of NIPAM represents a one-step method to fabricate thermally responsive coatings on real-world biomaterials without the need for specially prepared substrates and functionalized polymers.

Serial 10/047986

January 13, 2004

(FILE 'HOME' ENTERED AT 15:28:26 ON 12 JAN 2004)
 FILE 'REGISTRY' ENTERED AT 15:28:43 ON 12 JAN 2004
 E PERFLUOROCYCLOHEXANE/CN

L1 1 S E3
 E PERFLUOROHEXANE/CN
 L2 1 S E3
 E TETRAFLUOROETHYLENE/CN
 L3 1 S E3
 E TRIFLUOROETHYLENE/CN
 L4 1 S E3
 E VINYLIDINE FLUORIDE/CN
 E VINYLIDENEFLUORIDE/CN
 E VINYLIDENE-FLUORIDE/CN
 E VINYLFLUORIDE/CN
 E VINYL FLUORIDE/CN
 L5 1 S E3
 E FLUOROETHYLENE/CN
 L6 1 S E3
 E FLUOROPROPYLENE/CN
 E FLUORO-PROPYLENE/CN
 E FLUORO PROPYLENE/CN

FILE 'HCAPLUS, MEDLINE, EMBASE, BIOSIS' ENTERED AT 15:32:49 ON 12 JAN
 2004

L7 8201 S L1 OR L2 OR L3 OR L4 OR L5 OR L6
 L8 178 S (COLD (3W) PLASMA OR GLOW DISCHARGE OR COLD (2W)
 DISCHARGE) (2W)
 L9 170903 S DRUG DELIVERY
 L10 13235 S INHALER?
 L11 19558 S MDI
 L12 64936 S DISPENS? OR NEBULIZER? OR NEBULISER? OR VAPORIZER? OR
 VAPOURI
 L13 12798245 S DRUG OR DRUGS OR PHARMACEUTIC? OR MEDICAMENT? OR MEDICINE
 L14 8 S L7 AND L8
L15 1 S L14 AND (L9 OR L10 OR L11 OR L12 OR L13)
 L16 1579850 S POLYMER OR POLYMERS OR MONOMER OR MONOMERS
 L17 141 S L16 AND L8
 L18 135 S L17 NOT L14
 L19 1 S L18 AND (L9 OR L10 OR L11)
 L20 1 S L18 AND L12 AND L13
L21 1 S L19 OR L20 [a duplicate]
 FILE 'HCAPLUS' ENTERED AT 15:39:38 ON 12 JAN 2004
 E WARBY/AU
 L22 3 S E8 OR E10

L15 ANSWER 1 OF 1 MEDLINE on STN
 AN 94016984 MEDLINE
 DN 94016984 PubMed ID: 8411464
TI Failure of *glow*** - ***discharge*** ***polymerization***
 onto woven Dacron to improve performance of hemodialysis grafts.**
 AU Farmer D L; Goldstone J; Lim R C; Reilly L M
 CS Department of Surgery, University of California, San Francisco 94143-
 0222.
 SO JOURNAL OF VASCULAR SURGERY, (1993 Oct) 18 (4) 570-5; discussion 575-6.
 Journal code: 8407742. ISSN: 0741-5214.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 199311

ED Entered STN: 19940117

Last Updated on STN: 19940117

Entered Medline: 19931104

AB PURPOSE: The ideal conduit for hemodialysis vascular access remains elusive. Autogenous fistulas and prosthetic grafts, most commonly expanded polytetrafluoroethylene (e-PTFE), have adequate long-term patency

rates (60% to 80% at 1 year); however, considerable delay in their use (2 to 6 weeks) is required. The Plasma-TFE graft is a recently introduced thin-walled woven Dacron graft to which an ultrathin layer of tetrafluoroethylene is bonded through a process of ***glow*** -

discharge ***polymerization*** . This process purportedly results in a graft with an internal surface of low thrombogenicity. Low thrombogenicity, combined with the healing characteristics of a woven graft, have led to claims of equivalent patency rates even when used for dialysis immediately (within 1 week) after implantation. METHODS: This concept led us to use this new graft material in 19 fistulas (12 forearm and 7 arm) during a 1-year period. RESULTS: Although early use was possible, the primary and secondary patency rate at 12 months was only 47.4%. Ten grafts required replacement, five within the first month and two in the second month. Attempts at fistula revision failed because of unsuccessful graft thrombectomy or exuberant intimal hyperplasia.

Failure

was not associated with early use. During the same time period, 28 PTFE grafts were implanted, with only four failures (primary patency 78.6%; secondary patency 85.7%; p = 0.028). The secondary patency rate was the same for Plasma-TFE grafts (47%) but improved to 85.7% for e-PTFE grafts (p = 0.005). Both groups were comparable with respect to age, diabetes, previous dialysis access procedures, and other comorbid conditions.

CONCLUSIONS: These early results have been sufficiently disappointing

that

we have abandoned use of this graft approved for hemodialysis by the Food and ***Drug*** Administration and cannot recommend it for other clinical indications. Nevertheless, the concept of plasma-discharge polymerization is theoretically attractive and might be useful in future graft configurations.

CT Check Tags: Female; Human; Male

Adult

Aged

Aged, 80 and over

Anastomosis, Surgical

*Arteriovenous Shunt, Surgical: IS, instrumentation

*Catheters, Indwelling

Electrochemistry

Equipment Design

*Fluorocarbons: CH, chemistry

Follow-Up Studies

Middle Age

*Polyethylene Terephthalates: CH, chemistry

Polymers: CH, chemistry

Polytetrafluoroethylene: CH, chemistry

*Renal Dialysis: IS, instrumentation

Retrospective Studies

Surface Properties

Time Factors

Vascular Patency

RN ***116-14-3 (tetrafluoroethylene)*** ; 9002-84-0
(Polytetrafluoroethylene)

CN 0 (Fluorocarbons); 0 (Polyethylene Terephthalates); 0 (Polymers)

L22 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:504667 HCAPLUS

DN 137:68201

ED Entered STN: 05 Jul 2002

TI Metered dose inhaler for salmeterol xinafoate

IN Godfrey, Anne Pauline; ***Warby, Richard***

PA Glaxo Group Limited, UK

SO PCT Int. Appl., 37 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM A61M015-00

ICS A61K009-00; B65D083-14

CC 63-6 (Pharmaceuticals)

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---|------|----------|-----------------|----------|
| PI | WO 2002051483 | A1 | 20020704 | WO 2001-GB5749 | 20011221 |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | CA 2410004 | A | 20011129 | CA 2001-2410004 | 20010522 |
| | WO 2001089616 | A1 | 20011129 | WO 2001-GB2256 | 20010522 |
| | W: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | RW: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, VN, YU, ZA, ZW | | | | |
| | EP 1284771 | A1 | 20030226 | EP 2001-931894 | 20010522 |
| | R: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE, TR | | | | |
| | BR 2001011052 | A | 20030415 | BR 2001-11052 | 20010522 |
| | JP 2003534063 | T2 | 20031118 | JP 2001-585855 | 20010522 |
| | EP 1343550 | A1 | 20030917 | EP 2001-272108 | 20011221 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
| | BR 2001016396 | A | 20031111 | BR 2001-16396 | 20011221 |

| | | | | |
|--------------------|----|----------|----------------|----------|
| US 2003180228 | A1 | 20030925 | US 2003-296370 | 20030401 |
| NO 2003002836 | A | 20030815 | NO 2003-2836 | 20030620 |
| PRAI GB 2000-31502 | A | 20001222 | | |
| GB 2001-28612 | A | 20011129 | | |
| GB 2000-12522 | A | 20000523 | | |
| WO 2001-GB2256 | W | 20010522 | | |
| WO 2001-GB5749 | W | 20011221 | | |

AB A container comprises a canister sealed with a metering valve, having a metering chamber, which contains a pharmaceutical aerosol formulation consisting essentially of (A) particulate salmeterol xinafoate in combination with another drug useful in inhalation therapy, suspended in (B) a liquefied propellant gas comprising 1,1,1,2,3,3,3-heptafluoropropane, 1,1,1,2-tetrafluoroethane or a mixt., wherein the formulation is substantially free of surfactant and components having polarity higher than the liquefied propellant gas. The valve is characterized in that it contains 1 or more sealing gaskets substantially constructed from of a polymer of EPDM and the metering chamber surface presents a substantially fluorinated surface to the formulation. The **metered dose inhaler MDIs** were prep'd. in aluminum canisters coated with a PTFE/PES polymer blend sealed with a Bespak valve, wherein all the gaskets were made from EPDM polymer and wherein the metering chamber was composed of PBT and was conventional or **surface treated with a plasma coating of a C1-10 perfluoroalkane**. The aluminum canisters contained a pharmaceutical aerosol formulation comprising 4.2 mg salmeterol xinafoate and 12 g HFA 134a.

ST metered dose inhaler salmeterol xinafoate

IT Drug delivery systems
(aerosols, inhalants; metered dose inhaler for salmeterol xinafoate)

IT Drug delivery systems
(aerosols; metered dose inhaler for salmeterol xinafoate)

IT Lung, disease
(chronic obstructive; metered dose inhaler for salmeterol xinafoate)

IT Fluoro rubber
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hexafluoropropene-vinylidene fluoride; metered dose inhaler for salmeterol xinafoate)

IT Medical goods
(inhalers; metered dose inhaler for salmeterol xinafoate)

IT Asthma
Propellants (sprays and foams)
(metered dose inhaler for salmeterol xinafoate)

IT Fluoropolymers, biological studies
Polymer blends
RL: DEV (Device component use); POF (Polymer in formulation); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(metered dose inhaler for salmeterol xinafoate)

IT EPDM rubber
Metals, biological studies
Plastics, biological studies
Polyamides, biological studies
Polyesters, biological studies
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(metered dose inhaler for salmeterol xinafoate)

IT Perfluorocarbons
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(metered dose inhaler for salmeterol xinafoate)

IT Coating process
(plasma spraying; metered dose inhaler for salmeterol xinafoate)

IT Polysulfones, biological studies
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polyether-; metered dose inhaler for salmeterol xinafoate)

IT Polyethers, biological studies
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polysulfone-; metered dose inhaler for salmeterol xinafoate)

IT 9002-84-0, Poly(Tetrafluoroethylene) 24937-79-9, Polyvinylidene fluoride
25120-07-4, PolyHexafluoropropylene
RL: DEV (Device component use); POF (Polymer in formulation); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(metered dose inhaler for salmeterol xinafoate)

IT 116-14-3D, Tetrafluoroethylene, polymers with fluorine-contg. monomers
7429-90-5, Aluminum, biological studies 9002-83-9,
Polychlorotrifluoroethylene 9010-79-1D, Ethylene-propylene copolymer,
fluorinated 9011-17-0, Hexafluoropropylene-vinylidene fluoride
copolymer
12597-68-1, Stainless steel, biological studies 24968-12-5,

Polybutylene
terephthalate 25038-71-5, Ethylene-tetrafluoroethylene copolymer
25067-11-2, Hexafluoropropylene-Tetrafluoroethylene copolymer
26062-94-2, Polybutylene terephthalate 26655-00-5, Perfluoro(propyl
vinyl ether)-Tetrafluoroethylene copolymer 439813-66-8, Hostaform X 329
439813-68-0, Hostaform C 9021TF
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(metered dose inhaler for salmeterol xinafoate)

IT 431-89-0 811-97-2, HFA 134a 5534-09-8, Beclomethasone dipropionate
15826-37-6, Sodium cromoglycate 18559-94-9, Albuterol 22254-24-6,
Ipratropium bromide 51333-22-3, Budesonide 73573-87-2, Formoterol
80474-14-2, Fluticasone propionate 94749-08-3, Salmeterol xinafoate
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(metered dose inhaler for salmeterol xinafoate)

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Andrew, G; WO 0037336 A 2000
(2) Douglas, S; WO 9947195 A 1999 HCPLUS
(3) Glaxo Group Ltd; EP 0990437 A 2000 HCPLUS
(4) Hugh, R; WO 0176601 A 2001 HCPLUS
(5) John, W; US 6089256 A 2000
(6) LI Li; WO 9632150 A 1996 HCPLUS
(7) McLennan, A; WO 0056632 A 2000
(8) Minnesota Mining & Mfg; WO 9502651 A 1995

L22 ANSWER 3 OF 3 HCPLUS COPYRIGHT 2004 ACS on STN
AN 1999:166856 HCPLUS
DN 130:210589
ED Entered STN: 15 Mar 1999
TI Dosing valve for pressurized container

Serial 10/047986

January 13, 2004

IN ***Warby, Richard John***

PA Bespak PLC, UK

SO Ger. Offen., 6 pp.

CODEN: GWXXBX

DT Patent

LA German

IC ICM B65D083-54

ICS F16K021-04; A61J001-00; C08L027-18; A61M011-02

CC 38-3 (Plastics Fabrication and Uses)

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---------------|------|----------|------------------|----------|
| PI | DE 19835273 | A1 | 19990304 | DE 1998-19835273 | 19980804 |
| PRAI | GB 1997-18693 | | 19970903 | | |
| | GB 1997-21684 | | 19971013 | | |

AB The title valve, which minimizes deposition of the container contents on the walls of the dosing chamber, includes a valve shaft placed coaxially in a ring-shaped dosing chamber, elements on the inner and outer ends of the valve which seal the dosing chamber, and a bushing made of fluoropolymer, ceramic, metal, or glass which encloses at least part of the valve element. Drawings illustrating the valve are included.

ST valve dosing pressure container; fluoropolymer bushing dosing valve; ceramic bushing dosing valve; metal bushing dosing valve; glass bushing dosing valve

IT Bushings

 (bushing for dosing valve for pressurized container)

IT Ceramics

 (ceramic bushing for dosing valve for pressurized container)

IT Valves

 (dosing valve for pressurized container)

IT Fluoropolymers, uses

RL: TEM (Technical or engineered material use); USES (Uses)

 (fluoropolymer bushing for dosing valve for pressurized container)

IT Glass, uses

RL: TEM (Technical or engineered material use); USES (Uses)

 (glass bushing for dosing valve for pressurized container)

IT Metals, uses

RL: TEM (Technical or engineered material use); USES (Uses)

 (metal bushing for dosing valve for pressurized container)

IT Containers

 (pressure; dosing valve for pressurized container)

IT 9002-84-0, PTFE

RL: TEM (Technical or engineered material use); USES (Uses)

 (fluoropolymer bushing for dosing valve for pressurized container)

IT 7429-90-5, Aluminum, uses 12597-68-1, Stainless steel, uses

RL: TEM (Technical or engineered material use); USES (Uses)

 (metal bushing for dosing valve for pressurized container)

File 350:Derwent WPIX 1963-2004/UD,UM &UP=200402

File 347:JAPIO Oct 1976-2003/Sep(Updated 040105)

File 371:French Patents 1961-2002/BOPI 200209

| Set | Items | Description |
|-----|--------|--|
| S1 | 38830 | PERFLUOROCYCLOHEXANE OR PERFLUOROHEXANE OR TETRAFLUOROETHYLENE OR TRIFLUOROETHYLENE OR VINYL()FLUORIDE OR VINYLFLUORIDE OR FLUOROETHYLENE OR VINYLIDENE()FLUORIDE OR VINYLIDENEFLUORIDE OR FLUOROPROPYLENE |
| S2 | 211994 | MONOMER? ? |
| S3 | 8 | COLD()PLASMA()POLYMERI? |
| S4 | 98 | (COLD(3W)PLASMA OR GLOW()DISCHARGE OR COLD(2W)DISCHARGE) (2-W) POLYMERI? |
| S5 | 17873 | INHALER? ? OR NEBULI?ER? ? OR VAPORI?ER? ? OR VAPOURI?ER? - OR DRUG()DELIVERY OR MDI |
| S6 | 60182 | INHALING OR DISPENSING |
| S7 | 87396 | DRUG? ? |
| S8 | 142816 | PHARMACEUTIC? |
| S9 | 38789 | MEDICAMENT? ? |
| S10 | 258665 | MEDICINE? ? |
| S11 | 48 | S1:S2 AND S3:S4 |
| S12 | 6 | S11 AND S5:S6 |

12/26, TI/6 (Item 1 from file: 347)

DIALOG(R)File 347:JAPIO

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06963102

DRUG- DISPENSING DEVICE

12/34/4 (Item 4 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.

009098218 **Image available**

WPI Acc No: 1992-225651/199227

Appts. for applying composite insulative coatings to substrates - comprises polymerisation chamber with support, means for applying monomer gas vacuum and inlet for delivery of glow discharge polymerisation

Patent Assignee: UNIV MISSOURI (UMOR)

Inventor: HAHN A W; NICHOLS M F

Number of Countries: 001 Number of Patents: 001

Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week |
|------------|------|----------|-------------|------|----------|----------|
| US 5121706 | A | 19920616 | US 87109079 | A | 19871006 | 199227 B |
| | | | US 89439491 | A | 19891121 | |
| | | | US 90586513 | A | 19900921 | |

Priority Applications (No Type Date): US 87109079 A 19871006; US 89439491 A 19891121; US 90586513 A 19900921

Patent Details:

| Patent No | Kind | Lan Pg | Main IPC | Filing Notes |
|------------|------|--------|-------------|--------------------------------|
| US 5121706 | A | 2 | C23C-016/50 | Div ex application US 87109079 |
| | | | | Div ex application US 89439491 |

Abstract (Basic): US 5121706 A

Appts. comprises a polymerisation chamber (POC) equipped with a support for substrate; means for applying a vacuum; and an inlet for delivery of a glow discharge polymerisation monomer gas (G1). Outside the POC is an inductance coupling coil (ICC) for establishing a glow discharge zone within the chamber whereby a glow discharge

polymerisation primer contng. (derived from G1) may be applied to S. A **vaporiser** for vaporising a precursor (G2) for a vapour deposition polymer is connected to the inlet of a pyrolysis chamber (PYC).

Present within PYC is a heater for pyrolysing the vaporised G2; and within POC a temp. controller for adjusting the temp. of S to enable condensn. of a polymer from the pyrolysed vapour. The orientation of PYC, the outlet therefrom into the POC, the S support and the ICC is such that the vaporised precursor may be deposited either by **glow discharge polymerisation** or vapour polymerisation over the primer coating on S.

USE/ADVANTAGE - The appts. is used first to deposit a thin adherent coating of highly crosslinked liq. moisture-impervious primer on a substrate by **glow discharge polymerisation** of a low mol. wt. hydrocarbon **monomer** selected from methane, ethane, propane, ethylene and propylene. A second resilient, adherent polymer coating is then deposited on top in the like manner or by vapour deposition polymerisation using as feedstock on opt. substd. hydrocarbon exhibiting a hydrogen yield of not more than 0.75 H atom per mol under glow discharge conditions, to give a composite coating with good heat stability. The appts. and process is useful for encapsulating items exposed to highly humid and corrosive environments, e.g. electrodes, integrated circuits, semiconductors and other electronic components.

Derwent Class: A85; L03; M13; P42; U11

International Patent Class (Main): C23C-016/50

12/34/5 (Item 5 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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008284268

WPI Acc No: 1990-171269/199022

Projective water-impermeable composite coating for substrate - provided by successive glow discharge polymerisation of hydrocarbon monomers

Patent Assignee: UNIV MISSOURI (UMOR)

Inventor: HAHN A W; NICHOLS M F

Number of Countries: 017 Number of Patents: 007

Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week |
|------------|------|----------|-------------|------|----------|----------|
| US 4921723 | A | 19900501 | US 87109079 | A | 19871016 | 199022 B |
| WO 9116148 | A | 19911031 | | | | 199146 N |
| AU 9063544 | A | 19911111 | | | | 199207 N |
| CA 2015595 | A | 19911027 | CA 2015595 | A | 19900427 | 199304 N |
| EP 524923 | A1 | 19930203 | EP 90913602 | A | 19900416 | 199305 N |
| | | | WO 90US2087 | A | 19900416 | |
| AU 649411 | B | 19940526 | AU 9063544 | A | 19900416 | 199426 N |
| EP 524923 | A4 | 19950823 | EP 90913602 | A | 19900000 | 199618 |

Priority Applications (No Type Date): US 87109079 A 19871016; CA 2015595 A 19900427; EP 90913602 A 19900416

Cited Patents: US 4123308; US 4500562

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 9116148 A

Designated States (National): AU JP

Designated States (Regional): AT BE CH DE DK ES FR GB IT LU NL SE

EP 524923 A1 E 48 B05D-003/06 Based on patent WO 9116148

Designated States (Regional): AT BE CH DE DK ES FR GB IT LI LU NL SE

AU 649411 B B05D-005/12 Previous Publ. patent AU 9063544

Based on patent WO 9116148

Abstract (Basic): US 4921723 A

Electrically insulative, moisture-resistant, adherent composite coating is applied to a substrate. It comprises a thin, adherent, highly cross-linked, liquid moisture-impervious, primer coating provided by **glow discharge polymerisation** of a low mol.wt. hydrocarbon **monomer**, selected from methane, ethane, propane, ethylene, or propylene, in a low pressure chamber (9) contg. the substrate and a second polymeric coating layer provided over the primer coating by **glow discharge polymerisation** of a second precursor cpd. in the same low pressure chamber. The second precursor is a hydrocarbon or substituted hydrocarbon exhibiting a hydrogen yield not greater than 0.75 H atoms per mol. under the **glow discharge polymerisation** conditions used. The second coating is consequently resilient and strongly bonded to the primer coating and has a high concentration of surface and bulk free radicals.

USE/ADVANTAGE - Coating is effective for encapsulating electrodes, integrated circuits, semi-conductors, and other electronic components which are exposed to liquid water and ions. It is esp. suitable to protect electrodes, circuits, and components implanted in animal or human tissue. (19pp Dwg.No.2/10

Abstract (Equivalent): US 5121706 A

Appts. comprises a polymerisation chamber (POC) equipped with a support for substrate; means for applying a vacuum; and an inlet for delivery of a **glow discharge polymerisation monomer** gas (G1). Outside the POC is an inductance coupling coil (ICC) for establishing a glow discharge zone within the chamber whereby a **glow discharge polymerisation** primer contng. (derived from G1) may be applied to S. A **vaporiser** for vaporising a precursor (G2) for a vapour deposition polymer is connected to the inlet of a pyrolysis chamber (PYC).

Present within PYC is a heater for pyrolysing the vaporised G2; and within POC a temp. controller for adjusting the temp. of S to enable condensn. of a polymer from the pyrolysed vapour. The orientation of PYC, the outlet therefrom into the POC, the S support and the ICC is such that the vaporised precursor may be deposited either by **glow discharge polymerisation** or vapour polymerisation over the primer coating on S.

USE/ADVANTAGE - The appts. is used first to deposit a thin adherent coating of highly crosslinked liq. moisture-impervious primer on a substrate by **glow discharge polymerisation** of a low mol. wt. hydrocarbon **monomer** selected from methane, ethane, propane, ethylene and propylene. A second resilient, adherent polymer coating is then deposited on top in the like manner or by vapour deposition polymerisation using as feedstock on opt. substnd. hydrocarbon exhibiting a hydrogen yield of not more than 0.75 H atom per mol under glow discharge conditions, to give a composite coating with good heat stability. The appts. and process is useful for encapsulating items exposed to highly humid and corrosive environments, e.g. electrodes, integrated circuits, semiconductors and other electronic components.

(Dwg.2/10

Derwent Class: A85; L03; P42; U11

International Patent Class (Main): B05D-003/06; B05D-005/12

International Patent Class (Additional): B05D-001/36; B05D-003/14;
C08F-002/52; C23C-016/50

File 348: EUROPEAN PATENTS 1978-2003/Dec W02
File 349: PCT FULLTEXT 1979-2002/UB=20031225, UT=20031218
Set Items Description
S1 38343 PERFLUOROCYCLOHEXANE OR PERFLUOROHEXANE OR TETRAFLUOROETHYLENE OR TRIFLUOROETHYLENE OR VINYL()FLUORIDE OR VINYLFLUORIDE OR FLUOROETHYLENE OR VINYLIDENE()FLUORIDE OR VINYLIDENEFLUORIDE OR FLUOROPROPYLENE
S2 111479 MONOMER? ?
S3 8 COLD()PLASMA()POLYMERI?
S4 20 (COLD(3W)PLASMA OR GLOW())DISCHARGE OR COLD(2W)DISCHARGE) (2-W) POLYMERI?
S5 39020 INHALER? ? OR NEBULI?ER? ? OR VAPORI?ER? ? OR VAPOURI?ER? - OR DRUG()DELIVERY OR MDI
S6 44982 INHALING OR DISPENSING
S7 127105 DRUG? ?
S8 160794 PHARMACEUTIC?
S9 70748 MEDICAMENT? ?
S10 54174 MEDICINE? ?
S11 153835 POLYMERIZ? OR POLYMERIS?
S12 136435 S1:S2
S13 88 (COLD(3W)PLASMA OR GLOW())DISCHARGE OR COLD(2W)DISCHARGE) (2-W) S11
S14 80 S12 AND S13
S15 79748 S5:S6
S16 21 S14 AND S15
S17 7 S12(S)S13(S)S15
S18 14 S16 NOT S17

17/3,AB,K/2 (Item 2 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

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01429259

Aerosol drug dispensing device with dispensing chamber having walls surface coated with or formed of fluoropolymer

Aerosol-Medizinabgabevorrichtung mit Abgabekammer deren Wande mit einem Fluoropolymer beschichtet sind oder daraus bestehen

Distributeur a aerosol medical dont les surfaces de la chambre de distribution sont revetue d'un fluoropolymere ou sont formees de fluoropolymere

PATENT ASSIGNEE:

THE TECHNOLOGY PARTNERSHIP PUBLIC LIMITED COMPANY, (1162141), Melbourn Science Park Cambridge Road, Melbourn Royston Hertfordshire SG8 6EE, (GB), (Applicant designated States: all)

INVENTOR:

Blakey, David Mark, 49 Honeybourne, Bishops Stortford, Herts CM23 4EE, (GB)
Pollock, Neil, 20 Coombelands, Royston, Herts SG8 7DW, (GB)
Sant, Andrew Jonathan, 54 Chalmers Road, Cambridge CB1 3SX, (GB)

LEGAL REPRESENTATIVE:

Brunner, Michael John (28871), GILL JENNINGS & EVERY, Broadgate House, 7 Eldon Street, London EC2M 7LH, (GB)

PATENT (CC, No, Kind, Date): EP 1205201 A1 020515 (Basic)

APPLICATION (CC, No, Date): EP 2001309421 011107;

PRIORITY (CC, No, Date): EP 2000310050 001113

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE; TR

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: A61M-015/00

ABSTRACT EP 1205201 A1

An aerosol drug dispensing device (25) provides a metered dose of a pharmacologically active liquid (7) to a holding reservoir (18) from which the dose is then dispensed as an aerosol spray. The holding reservoir (18) has a containment wall or walls (22) having a surface coated with or formed of a fluoropolymer.

ABSTRACT WORD COUNT: 54

NOTE: Figure number on first page: 1

LANGUAGE (Publication, Procedural, Application): English; English; English

FULLTEXT AVAILABILITY:

| Available Text | Language | Update | Word Count |
|------------------------------------|-----------|--------|------------|
| CLAIMS A | (English) | 200220 | 138 |
| SPEC A | (English) | 200220 | 3499 |
| Total word count - document A | | | 3637 |
| Total word count - document B | | | 0 |
| Total word count - documents A + B | | | 3637 |

...SPECIFICATION in use to replace that in the emerging droplet spray.

WO 99/42154 discloses a drug delivery device for dispensing a metered dose of medicament. The device is provided with at least one internal surface which comes into contact with the medicament during storage or dispensing that has at least one layer of cold plasma polymerised monomers bonded thereto, the monomer being selected from the group of materials comprising perfluoro-cyclohexane, perfluoro-hexane, tetrafluoroethylene, trifluoroethylene, vinylidene fluoride, vinyl fluoride, fluoroethylene and fluoropropylene.

The present invention aims to provide an aerosol drug dispensing device which overcomes the above...

17/3,AB,K/5 (Item 1 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00976481

COATED MEDICINAL INHALATION DEVICES AND COMPONENTS METHOD

DISPOSITIFS D'INHALATION DE MEDICAMENTS ET COMPOSANTS A REVETEMENT FORME

PAR DEPOT CHIMIQUE EN PHASE VAPEUR THERMIQUE

Patent Applicant/Assignee:

3M INNOVATIVE PROPERTIES COMPANY, 3M Center, Post Office Box 33427, Saint Paul, MN 55133-3427, US, US (Residence), US (Nationality), (For all designated states except: US)

Patent Applicant/Inventor:

JINKS Philip A, 41 Highfields Drive, Loughborough, Leicestershire LE11 3JS, GB, GB (Residence), GB (Nationality), (Designated only for: US)

Legal Representative:

RINGSRED Ted K (et al) (agent), Office of Intellectual Property Counsel, Post Office Box 33427, Saint Paul, MN 55133-3427, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200306181 A1 20030123 (WO 0306181)

Application: WO 2002US21732 20020710 (PCT/WO US0221732)

Priority Application: US 2001304109 20010710

Designated States: AE AG AL AM AT (utility model) AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ (utility model) CZ DE (utility model) DE DK (utility model) DK DM DZ EC EE (utility model) EE ES FI (utility model) FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK (utility model) SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

Serial 10/047986

January 13, 2004

(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SK TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 8579

English Abstract

A method of making a **medicinal inhalation device** (100) with a fluorocarbon (CFⁿ)₂ polymer thin film coating (114) by pyrolyzing a monomer gas to produce polymerizable CFⁿ species in the vicinity of the surface on which the fluorocarbon polymer film (114) is to be formed, and maintaining the surface at a lower temperature than that of the heat source to induce deposition and polymerization of CFⁿ species on the surface.

Fulltext Availability: Detailed Description

Detailed Description

... coating is disclosed to be especially preferred. 2
WO 99/42154 discloses an apparatus for **dispensing** a medicament, wherein at least a portion of one or more of the internal surfaces of components of the apparatus, which come into contact with medicament during storage or **dispensing**, has a layer of one or more **cold plasma polymerized monomers** bonded to at least a portion thereof. It is disclosed that the cold plasma treatment...

...the components are placed inside a chamber, which is evacuated, and after one or more **monomers** are introduced to the chamber, a 13.56 MHZ r.f. signal is applied to...

...at the end of the treatment the plasma is extinguished, and the products retrieved. As **monomers** for use in this process are disclosed perfluoro-cyclohexane, perfluoro-hexane, **tetrafluoroethylene**, **trifluoroethylene**, **vinylidene fluoride**, **vinyl fluoride**, or siloxanes. evacuated; the fluorine monomer or fluorine source is introduced into the chamber at...

17/3,AB,K/6 (Item 2 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00572231

PLASMA ENHANCED POLYMER DEPOSITION ONTO FIXTURES
DEPOT POLYMER ACTIVE PAR PLASMA SUR DES STRUCTURES

Patent Applicant/Assignee:

BATTELLE MEMORIAL INSTITUTE,

Inventor(s):

AFFINITO John D,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200035604 A1 20000622 (WO 0035604)

Application: WO 99US30071 19991215 (PCT/WO US9930071)

Priority Application: US 98212774 19981216

Designated States: JP KR AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT
SE

Publication Language: English

Fulltext Word Count: 4118

English Abstract

Generally, the method of the present invention has the steps of (a) flash evaporating a liquid monomer forming an evaporate; (b) passing the evaporate to a **glow discharge** electrode creating a **glow discharge monomer**

plasma from the evaporate; and (c) cryocondensing the glow discharge monomer plasma on a fixture and crosslinking the glow discharge plasma thereon, wherein the crosslinking results from radicals created in the glow discharge plasma and achieves self curing.

Fulltext Availability: Detailed Description

Detailed Description

... or cross linked as a very thin polymer layer. The material may include a base monomer or mixture thereof, cross-linking agents and/or initiating agents. A disadvantage of the flash...

...of this radiation crosslinking method is the time between cryocondensation and curing permitting the cryocondensed monomer to flow or run, especially on fixtures having irregular non-flat geometry, leading to nonuniformity...

...the substrate surface 160. Reducing surface temperature can reduce the flow somewhat, but should the monomer freeze, then cross linking is adversely affected. Using higher viscosity monomers is unattractive because of the increased difficulty of degassing, stirring, and dispensing of the monome...

The basic process of plasma enhanced chemical vapor deposition (PECVD) is described...

...Press, 1978, Part IV, Chapter IV - 1 Plasma Deposition of Inorganic Compounds, Chapter IV - 2 Glow Discharge Polymerization , herein incorporated by reference. Briefly, a glow discharge plasma is generated on an electrode that...

...formed so that upon subsequent collisions with the substrate, some of the radicals in the monomers chemically bond or cross link (cure) on the substrate. The high vapor pressure monomeric gases...

...vapor pressure species have not been used in PECVD because heating the higher molecular weight monomers to a temperature sufficient to vaporize them generally causes a reaction prior to vaporization, or...

18/6/5 (Item 5 from file: 348)

00811510

USE OF A POLYMER AS A CELL GROWTH SUBSTRATE POLYMER

18/6/8 (Item 1 from file: 349)

01068913

POLYMER HAVING CHARGED UNITS

18/6/9 (Item 2 from file: 349)

00785695

GRAFT POLYMERIZATION OF SUBSTRATE SURFACES

18/6/10 (Item 3 from file: 349)

00572232 **Image available**

CONFORMAL COATING OF A MICROTEXTURED SURFACE

18/6/11 (Item 4 from file: 349)

00349035

CELL GROWTH SUBSTRATE POLYMER

18/6/14 (Item 7 from file: 349)

00231476 **Image available**

CONTROLLED POROSITY IMPLANTABLE PRIMARY LUMEN DEVICE

18/3,AB/2 (Item 2 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS
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01283215

Controlled porosity implantable primary lumen device
Implantierbare,eine kontrollierte Porositat aufweisende Vorrichtung mit
einem Primarlumen
Dispositif implantable, a lumiere primaire, a porosite regulee

PATENT ASSIGNEE:

Atrium Medical Corporation, (1631542), 5 Wentworth Drive, Hudson, NH
03051, (US), (Applicant designated States: all)

INVENTOR:

Herweck, Steve A., 12 Lansing Drive, Nashua, NH 03062, (US)
Karwoski, Theodore, 61 Hannah Drive, Hollis, NH 03049, (US)
Martakos, Paul, 7 Tina Avenue, Pelham, NH 03076, (US)

LEGAL REPRESENTATIVE:

Greenwood, John David et al (56695), Graham Watt & Co. Riverhead,
Sevenoaks Kent TN13 2BN, (GB)

PATENT (CC, No, Kind, Date): EP 1101457 A2 010523 (Basic)
EP 1101457 A3 011107

APPLICATION (CC, No, Date): EP 2001200633 920916;

PRIORITY (CC, No, Date): US 760716 910916; US 760717 910916; US 760718
910916; US 760728 910916; US 760753 910916

DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IE; IT; LI; LU; MC;
NL; SE

RELATED PARENT NUMBER(S) - PN (AN):

EP 604546 (EP 92920322)

INTERNATIONAL PATENT CLASS: A61F-002/04; A61F-002/06

ABSTRACT EP 1101457 A2

An implantable prosthetic device for connection to a fluid flow pathway of a patient, the device comprising an implantable body made of a single biocompatible material and extruded as a single body with microporous interior walls, said extruded single body having a shape to attach to said fluid flow pathway, said single body further having a multiplicity of capillary lumina (314) therein defined by said microporous interior walls (315) and extending substantially parallel to each other along a longitudinal axis of the body for accommodating fluid flow along said axis when attached to said fluid flow pathway.

ABSTRACT WORD COUNT: 98

NOTE: Figure number on first page: 16

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

| Available Text | Language | Update | Word Count |
|------------------------------------|-----------|--------|------------|
| CLAIMS A | (English) | 200121 | 321 |
| SPEC A | (English) | 200121 | 19305 |
| Total word count - document A | | | 19626 |
| Total word count - document B | | | 0 |
| Total word count - documents A + B | | | 19626 |

18/3,AB/4 (Item 4 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS
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01280418

Controlled porosity implantable primary lumen device
Implantierbare,eine kontrollierte Porositat aufweisende Vorrichtung mit
einem Primarlumen

Dispositif implantble, a porosite regulee, a lumiere primaire

PATENT ASSIGNEE:

Atrium Medical Corporation, (1631542), 5 Wentworth Drive, Hudson, NH 03051, (US), (Applicant designated States: all)

INVENTOR:

Herweck, Steve A., 12 Lansing Drive, Nashua, NH 03062, (US)
Karwoski, Theodore, 61 Hannah Drive, Hollis, NH 03049, (US)
Martakos, Paul, 7 Tina Avenue, Pelham, NH 03076, (US)

LEGAL REPRESENTATIVE:

Greenwood, John David et al (56695), Graham Watt & Co. Riverhead,
Sevenoaks Kent TN13 2BN, (GB)

PATENT (CC, No, Kind, Date): EP 1099423 A2 010516 (Basic)
EP 1099423 A3 011114

APPLICATION (CC, No, Date): EP 2001200638 920916;

PRIORITY (CC, No, Date): US 760716 910916; US 760717 910916; US 760718 910916; US 760728 910916; US 760753 910916

DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IE; IT; LI; LU; MC;
NL; SE

RELATED PARENT NUMBER(S) - PN (AN):

EP 604546 (EP 92920322)

INTERNATIONAL PATENT CLASS: A61F-002/06; A61L-027/54

ABSTRACT EP 1099423 A2

An implantable prosthetic device for connection to a fluid flow pathway of a patient, the device comprising a biocompatible microporous wall that surrounds an interior space which constitutes a lumen that extends along a longitudinal axis and is adapted for the accommodating fluid flow therethrough, and plural remotely detectable components formed integrally within secondary lumina (216) in said wall to move therewith said secondary lumens (216) formed by extrusion and each extending in a line parallel to said -longitudinal axis, such that said plural remotely detectable components are remotely detectable as lines that move relative to each other with pulsatile motion of the wall as blood flows through the lumen for indicating patency of the lumen.

ABSTRACT WORD COUNT: 117

NOTE: Figure number on first page: 12

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

| Available Text | Language | Update | Word Count |
|------------------------------------|-----------|--------|------------|
| CLAIMS A | (English) | 200120 | 290 |
| SPEC A | (English) | 200120 | 19307 |
| Total word count - document A | | | 19597 |
| Total word count - document B | | | 0 |
| Total word count - documents A + B | | | 19597 |

18/3,AB/6 (Item 6 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

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00716342

**PLASMA MODIFICATION OF LUMEN SURFACE OF ARTIFICIAL TUBING
VERAENDERUNG DES LUMENS VON KUENSTLICHEN GEFAESSEN MITTELS PLASMA
MODIFICATION PAR PLASMA DE LA SURFACE DE LA LUMIERE D'UN TUBE ARTIFICIEL**
PATENT ASSIGNEE:

NEOMECS INCORPORATED, (1994350), 4832 Park Glen Road, St. Louis Park, MN 55416, (US), (applicant designated states:
AT;BE;CH;DE;DK;ES;FR;GB;GR;IE;IT;LI;NL;PT;SE)

INVENTOR:

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APPLICATION (CC, No, Date): EP 95909357 950126; WO 95US1095 950126

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B05D-007/24; A61L-027/00;

NOTE: No A-document published by EPO

LANGUAGE (Publication, Procedural, Application): English; English; English

FULLTEXT AVAILABILITY:

| Available Text | Language | Update | Word Count |
|------------------------------------|-----------|--------|------------|
| CLAIMS B | (English) | 9817 | 789 |
| CLAIMS B | (German) | 9817 | 769 |
| CLAIMS B | (French) | 9817 | 898 |
| SPEC B | (English) | 9817 | 10116 |
| Total word count - document A | | | 0 |
| Total word count - document B | | | 12572 |
| Total word count - documents A + B | | | 12572 |

18/3,AB/7 (Item 7 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

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00585545

**Extruded, controlled porosity implantable multi lumen device and method for
making the same**

**Implantierbare mehrlumige, eine kontrollierte Porositat aufweisende,
extrudierte Vorrichtung und Verfahren zur Herstellung**

**Dispositif implantable extrude, a lumieres multiples, a porosite regulee,
et methode de fabrication**

PATENT ASSIGNEE:

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APPLICATION (CC, No, Date): EP 92920322 920916; WO 92US7828 920916

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LANGUAGE (Publication, Procedural, Application): English; English; English

FULLTEXT AVAILABILITY:

| Available Text | Language | Update | Word Count |
|------------------------------------|-----------|--------|------------|
| CLAIMS B | (English) | 200303 | 541 |
| CLAIMS B | (German) | 200303 | 544 |
| CLAIMS B | (French) | 200303 | 625 |
| SPEC B | (English) | 200303 | 8043 |
| Total word count - document A | | | 0 |
| Total word count - document B | | | 9753 |
| Total word count - documents A + B | | | 9753 |

18/3, AB/12 (Item 5 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00302537

PLASMA MODIFICATION OF LUMEN SURFACE OF ARTIFICIAL TUBING

MODIFICATION AU PLASMA DE LA SURFACE DE LUMIERE D'UN TUBE ARTIFICIEL

Patent Applicant/Assignee:

NEOMECS INCORPORATED,
NOMURA Hiroshi,

Inventor(s):

NOMURA Hiroshi,

Patent and Priority Information (Country, Number, Date):

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English Abstract

The lumen surface of tubing is modified by exposure to a gas plasma in a vacuum apparatus. A method and apparatus are disclosed whereby plasma treatment of the lumen surface, such as by deposition of a plasma polymerizate, may be achieved inside a continuous length of tubing. A gas such as a monomer vapor is caused to enter the lumen of a tubing (11) through openings (12) sequentially arranged at a periodic interval along the length of the tubing, and is excited to a plasma state by a radiofrequency electrode (38) concurrently as the tubing passes through a tubular reaction conduit (15) having an inner circumference (36) in occlusive contact with the tubing's outer surface (35). Crack-free plasma polymerizate coatings with thicknesses greater than 1000 angstroms are selectively deposited on the lumen wall of the continuous tubing. Thus, the lumen wall of a 3.9 mm silicone tubing is coated with a crack-free polymerizate of tetrafluoroethylene in a continuous operation by exposure to a radiofrequency glow discharge gas plasma maintained at a power input ratio of between 1 x 10⁷ J/kg and 1 x 10⁸ J/kg.

Plasma-modified tubing is prepared, having usefulness in medical devices such as catheters, vascular grafts and enteral feeding tubes.